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EXAMINER

BAREFORD, KATHERINE A

ART UNIT PAPER NUMBER

1762

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/659,853

Applicant(s)

DAHLBERG, HAKAN

Examiner

Katherine A. Bareford

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 2 is objected to because of the following informalities: in claim 2, line 3, "moves passed" should apparent be "moves pass⁺" for correct grammar.

Appropriate correction is required.

Specification

2. The disclosure is objected to because of the following informalities: at page 5, line 11, in the reference to Fig. 5, reference should also be made to figures 5A and 5B.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 8 requires the use of an endless wire to apply the coating color. However, it is not understandable from reading the specification or claims how a single endless wire applies the coating to the entire web of paper as claimed. See page 13, line 20+ of the specification. As a result, one of ordinary skill in the art would not be enabled to make and/or use the invention.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 4, "coating color" should apparently be "coating with color" at this line and throughout the rest of the claims, because as described in the specification it is the coating that is doctored, not the color material alone. See page 14, line 20 through page 15, line 5 of the specification, for example. If the term "coating color" was used, it would appear that the color material alone could be doctored.

Claim 3, line 4, it should be clarified that "the ultrasonic transducer" refers to the applicator transducer and not to the blade transducer, as claim 3 and claim 1 provide for the existence of two ultrasonic transducers.

Claim 7, lines 4-5, it is unclear what is meant by "circulating water through pins" as there is no operative connection between the other elements and the water or pins.

The other dependent claims do not cure the defects of the claims from which they depend.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4, 6-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leino et al (US 6303187) in view of DE 2356737 (hereinafter '737).

Leino teaches a method of applying a coating on a paper substance. Figure 1 and column 2, lines 40-55 and column 4, lines 20-50 (the paperboard would be a form of paper materials). A paper substrate is moved over a roller. Figure 1 and column 2, lines 40-55 and column 4, lines 20-50. A coating containing color is applied to the paper with a coating applicator. Figure 1 and column 4, lines 20-50 and column 6, lines 45-55. A blade is applied to the paper to scrape off excessive coating containing color from the paper. Figure 1 and column 4, lines 30-45 (the use of doctor blade 9).

Claim 2: the blade is bent with a pressure applicator that bears against the blade as the paper moves past the blade. Figure 1 and column 4, lines 35-50.

Claims 3, 9: Leino provides that the coating applicator can also have a doctor blade. Figure 2 and column 4, lines 50-65 (blade 16).

Leino teaches all the features of these claims except vibrating the doctor blade with an ultrasonic transducer (claim 1), the blade and its ultrasonic features (claims 4, 6, 7) and the ultrasonic vibration of the applicator (claims 3, 9).

However, '737 teaches a doctor blade system for thickness regulation of a coating on a paper web. Abstract and figure 1. The doctor blade is held by a holder. Figure 1 (element 3). The doctor blade is pressed against the paper with a pressure applicator (element 6) while the paper moves pass the blade. Abstract and figure 1. This pressure would bend the blade as the blade is flexible (as shown by the vibration). Abstract and figure 1. The blade is vibrated by an ultrasonic device that is adhered against the blade during coating. Abstract, figure 1 and page 3, last paragraph, which indicates that element 10 is a vibration generator that passes ultrasonic vibrations to the blade through element 11. This provides better coating. Abstract. The vibration generator system can be an electro-mechanical system. Page 3, last paragraph. The vibration passes to a blade tip of the blade, since the vibrations are such as to smooth the coating, which is impacted by the blade tip. Abstract. The doctor blade is firmly held (clamped). Abstract.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leino to vibrate the blade ultrasonically as suggested by '737 with a expectation of providing a desirably smooth coating, because Leino teaches a process of coating a web and doctoring the applied coating with a doctor blade, and '737 teaches that when doctoring a coating on a web with a doctor blade it is desirable to vibrate the doctor blade with ultrasonic vibrations to provide a smooth coating on the web. It would further have been obvious to use an ultrasonic transducer to provide the vibrations, because '737 provides an ultrasonic vibration generator and

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teaches that it can be electro-mechanical, suggesting that the device is a transducer that takes electrical energy and converts it to mechanical energy (transduces it). It would further have been obvious to modify Leino in view of '737 to provide the coating applicator with an ultrasonic transducer as well and apply the coating while subjecting it to ultrasonic treatment, in order to provide a smooth coating, because Leino teaches that the coating applicator also contains a doctor blade and '737 suggests the use of the vibrating the doctor blade to provide a smooth coating, and therefore, the use of vibrating with the first, initial doctoring would provide a smoother initial doctoring and at the same time vibrate the coating at application, thus lowering its viscosity. The use of the system of Leino in view of '737 would have provided firmly holding the doctor blade to the extent claimed by claim 7, as it would be firmly held by being clamped, thus preventing the energy transfer (note the 35 USC 112 confusion as to the water/pins).

Allowable Subject Matter

9. Claims 5 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 5 requires the holder with grooves not taught or suggested by the prior art. Claim 10 requires another transducer to vibrate the pressure applicator, which is not taught or suggested by the prior art.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:30-4:00) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (571) 272-1415. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


KATHERINE BAREFORD
PRIMARY EXAMINER